

REMARKS

I. Status of Claims

Claims 1-20 are pending. No claim is amended herein.

Applicant thanks the Examiner for indicating that Claims 14 and 15 would be allowable if rewritten in independent form including all of the limitations of the base claim.

II. Rejection Under 35 U.S.C. § 103(a)

The Examiner has rejected claims 1-12, 14, 15, 19, and 20 as obvious over U.S. Patent No. 3,562,401 ("Long") in view of U.S. Patent No. 4,845,308 ("Womack"), claim 17 as obvious over Long in view Womack and U.S. Patent No. 6,512,311 ("Metra"); and claim 18 as obvious over Long in view Womack and U.S. Patent No. 6,509,819 ("Snitchler"), for the reasons disclosed at pages 2-6 of the Final Office Action. Applicant respectfully traverses this rejection for at least the reasons presented below.

To establish a *prima facie* case of obviousness under 35 U.S.C. § 103, the Examiner bears the burden of establishing each of three requirements. First, the references must teach or suggest each and every element recited in the claims. See M.P.E.P. § 2143.03. Second, the Examiner must establish that some suggestion or motivation, either in the reference itself, or in the knowledge generally available to one of ordinary skill in the art, to combine the references to achieve the presently claimed invention. See M.P.E.P. § 2143.01. Third, the Examiner must

establish a reasonable expectation of success for the proposed combination. See M.P.E.P. § 2143.02. Moreover, each of these requirements must “be found in the prior art, and not be based on applicant’s disclosure.” M.P.E.P. § 2143.

At a minimum, the Examiner cannot establish that some suggestion or motivation exists, either in Long, Womack, Metra, Snitchler, or in the knowledge generally available to one of ordinary skill in the art, to combine or modify the references to achieve the presently claimed invention. See M.P.E.P. § 2143.01. Applicant submits that neither Long, Womack, Metra, nor Snitchler provide the requisite motivation or suggestion to modify the superconducting cable of Long to include wrapping the superconducting cable with the outer dielectric layer of Womack, as the Examiner suggests. See Office action at p. 3.

The Examiner acknowledges that Long does not disclose the claim limitation of “an electric insulation layer positioned externally to said cryostat.” Office Action, p. 3. “There are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art.” In re Rouffet, 47 U.S.P.Q.2d 1453, 1457-58 (Fed. Cir. 1998) (eventhough references taught all elements, there was no prima facie case of obviousness because there was no motivation to combine). Here, the Examiner has not identified a problem to be solved or some statement in Long, Womack, Metra, or Snitchler that the proposed modification is either suggested or shown to be desirable, particularly for a configuration such as Long’s. Rather, to correct for this deficiency, the Examiner merely asserts that it is “well known in the

art to wrap a superconducting cable in an outer dielectric layer as evidenced by Womack.” *Id.* This is wholly inadequate for a prima facie case of obviousness.

The M.P.E.P is very clear on this point. “[T]he mere fact that the references can be combined or modified does not render the resultant combination obvious unless the prior art suggest the desirability of the combination.” M.P.E.P. § 2143.01 (citing *In re Mills* 916 F.2d. 680 (Fed. Cir. 1990)). The Examiner must identify some reason a person of ordinary skill in the art would believe that Long’s cable is need of Womack’s outer dielectric layer or that Womack’s outer dielectric layer brings some advantage to Long’s cable.

Applicant submits that a person of ordinary skill in the art reading Long would not believe that Womack’s outer dielectric layer is necessary. First, Long already has a dielectric layer, e.g., the dielectric supports **150** and the liquid nitrogen. Col. 3, lines 1-5. There is no evidence that Long’s design needs a second dielectric layer. Second, Long discloses that it is essential for a cryostat to be external to the dielectric layer so as to prevent ambient heat leakage. See e.g., Abstract, col.. 2, lines 15-17, col. 3, lines 45-49, col. 4, lines 19-22. Accordingly, Long offers no motivation to modify its structure to include the outer dielectric layer disclosed by Womack.

Applicant submits that there is no evidence that the secondary references, Womack, Metra, and/or Snitchler, correct this deficiency of Long. The Examiner has relied upon Metra and Snitchler for other purposes. With respect to Womack, the reference merely discloses that an “electrical and heat insulator is provided around

the outer tube.” Col. 2, lines 42-43. There is no suggestion of any advantage to the location of the electrical insulator. Without more, there is no reason for a person of ordinary skill in the art to modify Long.

Finally, Applicant submits that a person of ordinary skill in the art would not be motivated to add the outer dielectric layer of Womack to Long's cable. First, the Examiner's proposal increases the complexity of the manufacturing process for the cables. Second, the Examiner's proposal increases the size of the cable, which reduces its suitability for various uses. Third, the Examiner's proposal increases the costs for the cables. Thus, overall, without a definable advantage to adding a second dielectric layer, the Examiner's proposal is contrary to any apparent reasonable business objective for these cables.

Accordingly, Applicant requests that the Examiner withdraw the rejection of Claims 1-12, 14, 15, 17, 19, and 20 under 35 U.S.C. 103(a).

III. CONCLUSION

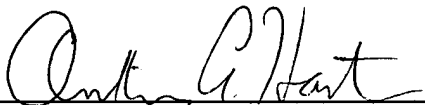
In view of the foregoing remarks, Applicant submits that this claimed invention is neither anticipated nor rendered obvious in view of the prior art references cited against this application. Applicant therefore respectfully request reconsideration of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and
charge any additional required fees to our deposit account no. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

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By: 
Anthony A. Hartmann
Reg. No. 43,662